

COMPLETE LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A method of manufacturing a bipolar graphite article, comprising:

(a) forming from graphite material, a first component having an operative side and a back side, and having a protrusion formed on its back side;

(b) forming from graphite material, a second component having an operative side and a back side, and having a recess formed in its back side, the recess being complementary to the protrusion of the first component; and

(c) assembling the first and second components so that the protrusion of the first component is received in the recess of the second component.

2. (original) The method of claim 1, wherein:

step (a) comprises embossing a sheet of resin-impregnated graphite material to form the first component.

3. (original) The method of claim 2, wherein the sheet of resin-impregnated graphite material is uncured at the time of step (a).

4. (original) The method of claim 3, which further comprises curing the resin-impregnated graphite material.

5. (original) The method of claim 1, wherein:

step (a) comprises compressing a particulate resin impregnated graphite material.

6. (original) The method of claim 5, wherein the resin impregnated graphite material is uncured at the time of step (a).

7. (original) The method of claim 6, which further comprises curing the resin impregnated graphite material.

8. (original) The method of claim 1, wherein:
step (c) includes pressing the first and second components together.

9. (original) The method of claim 8, wherein:
in step (a), the graphite material is resin impregnated, uncured material; and
curing occurs during the pressing step.

10. (original) A method of manufacturing a bipolar article for a fuel cell, comprising:

(a) providing first and second sheets of a compressed mass of expanded graphite particles, each sheet having first and second parallel opposed surfaces;

(b) impregnating the sheets with a resin to form uncured resin impregnated sheets;

(c) calendaring the uncured resin impregnated sheets to form first and second calendered uncured resin impregnated sheets;

(d) embossing the first and second calendered uncured resin impregnated sheets, thereby:

(1) forming from the first sheet a first component having a protrusion defined thereon; and

(2) forming from the second sheet a second component having a recess defined thereon;

(e) pressing the first and second components together with the protrusion of the first component received in the recess of the second component; and

(f) curing the resin of the components and thereby bonding the first and second components together to form the bipolar article.

11. (previously presented) The method of claim 2 wherein step (b) comprises embossing a second sheet of resin impregnated graphite material from the second component and further comprising heating the bipolar graphite article after said assembling.

12. (previously presented) The method of claim 11 wherein the graphite material of the first component comprises a second flexible graphite sheet.

13. (previously presented) The method according to claim 12 wherein a resin content of the first graphite sheet comprises at least 5% by weight and up to 60% by weight and a resin content of the second flexible graphite sheet comprises at least 5% by weight and up to 60% by weight.

14. (previously presented) The method according to claim 13 wherein the resin content of the first graphite sheet comprises about the same as the resin content of the second flexible graphite sheet.

Claims 15 & 16 (canceled)

17. (previously presented) The method according to claim 12 wherein a density of the first flexible graphite sheet comprises 0.1 g/cc up to 1.5 g/cc and a density of the second flexible graphite sheet comprises 0.1 g/cc up to 1.5 g/cc.

18. (previously presented) The method according to claim 17 wherein a density of the first flexible graphite sheet comprises substantially the same as the density of the second flexible graphite sheet.

19. (previously presented) The method of claim 2 wherein step (b) comprises embossing a second sheet of resin impregnated graphite material to form the second component and further comprising bonding the first component to the second component after said assembling.

20. (previously presented) The method according to claim 19 wherein the bonding consists of heating up the bipolar graphite article.